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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/885,249	03/28/2001	James Robert Deerman	NR-9	2549

7590 02/23/2005

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EXAMINER	
NGUYEN, SON XUAN	
ART UNIT	**PAPER NUMBER**
2664	

DATE MAILED: 02/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/885,249	DEERMAN ET AL.	
	Examiner	Art Unit	
	SON X. NGUYEN	2664	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 March 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-17* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *10-17* is/are allowed.

6)☒ Claim(s) *1-9* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *28 March 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities:

In page 9 line 29, there appears to be a typographical error and "Network processing system 100" should be "Network processing system 40".

Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

3. Claims 1-9 are rejected under 35 U.S.C. 102(e) as being anticipated by Mizutani at el. (US 6,798,757) hereinafter referred to as Mizutani.

Regarding claim 1, Mizutani discloses a network processing system **(Edge Router 31 of Fig. 1 corresponds to network processing system)** for use in a network, the network passing a plurality of data packets, which form a plurality of flows, the network processing system comprising:

A network interface operable to receive data packets from the network and further operable to send processed data packets back onto the network **(Input and Output Interfaces of Edge Router 31 correspond to network interfaces; See Fig. 4A)**; and

A learning state machine **(Per-Hop-Behaviors PHB's corresponds to a learning state machine; See lines 9-14 of column 2)** in communication with the network interface, the learning state machine operable to learn and maintain state for particular flows **(PHB's process data packets, provide information on how to route, transport data packets, and guarantee a level of quality of service of received data packets; See lines 9-16 of column 2)**, wherein the learning state machine assigns an identifier to one or more of the particular flows and associates each data packet belonging to that flow with the identifier **(MPLS label is added to received data packet; See 23-24 of column 6 and Fig. 4A)**, the learning state machine further operable to identify characteristics of one or more of the particular flows **(MPLS label identifies characteristics of data packets by identifying a corresponding label information list 91 stored in**

PHB table 93; See lines 24-29 of column 6 and Fig. 5) and to store those characteristics in a state database in the learning state machine such that the network processing system is able to treat the data packets based on the state of the associated flow **(Events and characteristics of data packets are obviously stored in Label information list and QoS state list as state information for future reference)**.

Regarding claim 2, Mizutani discloses a second learning state machine, wherein each learning state machine is unidirectional in the opposite direction thereby creating a bi-directional network processing system, wherein the learning state machine and the second learning state machine are able to share state information concerning related flows **(Edge router 31 is a bi-directional, so the function of it is combination of first and second learning state machines)**.

Regarding claim 3, Mizutani discloses identifying events and characteristics of each of the particular flows by comparing the contents of each of the particular flows to a database of known signatures, wherein a match with one of the known signatures corresponds to a certain event or characteristic **(MPLS label identifies characteristics of data packets by identifying a corresponding label information list 91 stored in PHB table 93; See lines 24-29 of column 6 and Fig. 5)**.

Regarding claim 4, Mizutani discloses a treatment for each data packet is determined based on the results of the comparison with the database of known signatures **(Based on information from contained in label information list output port is selected for data packets; See lines 26-29 of column 6)**.

Regarding claim 5, Mizutani discloses the learning state machine is able to examine the entire contents of each data packet and to maintain state across packet boundaries **(Admission control, queuing, and shaping/scheduling are performed on data packets based on QoS state list stored in PHB table 93; See lines 36-59 of column 6)**.

Regarding claim 6, Mizutani discloses the database of known signatures is programmed at a separate server and downloaded into the network processing system in the form of an image file **(Label information list and QoS state list in PHB table; See Fig. 5)**.

Regarding claim 7, Mizutani discloses the events and characteristics learned by the network processing system are compiled into statistics for the network **(The contents of label information list and QoS state list; See Fig. 5)**.

Regarding claim 8, Mizutani discloses the learning state machine includes a header preprocessor for examining header information in the packet, a content processor for comparing the packet to the database and determining a treatment, and a quality of service processor for modifying the packet and directing the packet according to the treatment **(The output of PHB's is the output combination of header processor, content processor and quality service processor)**.

Regarding claim 9, Mizutani discloses a microprocessor for data packets that require additional processing **(Port controller corresponds to microprocessor; See Fig. 2).**

Allowable Subject Matter

4. Claims 10-17 are allowed.

5. The following is an examiner's statement for reasons for allowance:

Claim 10 is allowable over the prior art of record since the cited references taken individually or in combination fails to particularly disclose **a traffic flow processor processing the data packets to associate each data packet with a particular flow, to maintain state for each flow, and to compare one or more flows to a database of known signatures, such that a match with one or more signatures within the database of known signatures causes the network processing system to apply a treatment to the flow; a quality of service processor communicating with the traffic flow processor and receiving the treatment, such that the quality of service processor uses the treatment to determine the handling of the data packets and their associated flow**. It is noted that the closest prior art, Mizutani at el. (US 6,798,757) shows a method and a system provide information on how to route, transport, and process packets belonging to a session. In one embodiment, each of the PHB's indicates a priority level, forwarding port number, rules for discarding packets, rules for sending packets, etc. However, Ors et al. fails to disclose or render obvious the above underlined limitations as claimed.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should

preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a) Epps at el. (U.S 6,813,243) High-speed hardware implementation of red congestion control algorithm.

b) Sanzi at el. (U.S 6,477,166) System, method and switch for an MPLS network and an ATM network.

c) Miki at el. (U.S 6,771,662) Label switching type of packet forwarding apparatus.

d) Sasagawa et al. (U.S 6,771,645) Packet relaying apparatus.

e) Chin, Hon Wah (U.S 5,872,783) Arrangement for rendering forwarding decisions for packets transferred among network switches.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to SON X. NGUYEN whose telephone number is 571-272-6048. The examiner can normally be reached on 8 AM -5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ken Vanderpuye can be reached on 571-272-3078. The

fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).